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Exchange/Outlook E-mail Project Update

The E-mail Implementation Team is working with the membership of ITMC (Information Technology Managers Council) and NMG (Network Managers Group) to develop "User Profiles" for every location in the state where an agency has offices.

Some of the information to be collected is:

- the exact location of the office
- the state of the hardware — how close is that location to being 32-bit ready? (Locations that are 32-bit ready will be given priority over those running 16-bit systems.)
- the network operating system used
- the current ZIP! gateway used
- and the way e-mail and calendaring is currently used within that location (Does the traffic stay within the workgroup at that location? Does the traffic stay within the agency? Are appointments scheduled with others in different locations?)
- Training liaison, technical contact and agency technical support for e-mail

The information will be collected in an Oracle database accessed through ISD's Web site **http://www.state.mt.us/isd/planning/index.htm.**

The information will be used during the planning phase. It will help the Team determine where to locate the Exchange servers, the configuration of the server needed at each location, where communications lines will need to be upgraded, remote user needs, and, pilot groups and deployment schedules.

For more information on the Exchange implementation, contact Wendy Wheeler of the Policy, Development & Customer Relations Bureau at 444-2856, ZIP! or e-mail at wwheeler@mt.gov.

Project Vision Statement

The State of Montana will establish the foundation for a mission critical messaging system enabling effective electronic business communication.

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Certification Authority and Digital Signatures

In the last issue of *ISD News & Views*, information was provided about cryptography. In the public-key type of cryptography, there are two keys generated, one public and one private. The public key is used to encrypt the data while the private key is used to decrypt the data. The public key can be shared with anyone. The private key gives the user the ability to read the data that was encrypted with the public key. This type of cryptography needs to have the ability to confirm that a public key belongs to a certain individual. A third party called a Certification Authority completes this confirmation.

A Certification Authority (CA) is an organization that provides the secure and trusted mathematical computations resulting in a unique digital certificate for an individual that cannot be duplicated. A certificate is basically a CA's signature of an individual's public key. It usually contains either the name of a person or an organization, their public key, the CA's signature of the key, and an expiration date. The standard for these certificates is referred to as X.509.

Digital certificates or IDs are the electronic counterparts to membership cards, driver's licenses, and passports. They establish an individual's identity in the electronic world just as these traditional credentials identify an individual's identity in the physical world. There are several different types of digital IDs available. The different types carry different information and require different levels of authentication. For example, it is fairly easy to obtain a membership card for a local discount warehouse, but to get a passport, you must provide substantial proof of identity, such as a notarized copy of a birth certificate. Obtaining a Class 1 digital ID is fairly easy, the user only needs to provide an e-mail address, but obtaining a Class 3 digital ID requires that the user provide substantial proof of identity.

Digital IDs enable the use of digital signatures, which are necessary to conduct much of the electronic commerce that is becoming common in today's electronic environment. Digital signatures provide verification that information originated from the person who sent the information and the information has not been altered since leaving the sender.

A CA basically guarantees that people and organizations are authentic and reliable. It provides a way for trusted relationships in networks that are not secure, such as the Internet.

For more information regarding certification authorities and/or digital signatures, contact Lynne Pizzini, Network Security Officer at 444-4510, ZIP! or e-mail at lpizzini@mt.gov.

www.state.mt.us/isd/current/news/index.htm

Calendar of Events

May 6
Information Technology Managers Council (ITMC) 8:30–10:30am, Rm 111, Metcalf Bldg.

May 14
9-1-1 Advisory Council
9am-12pm, Rm 108, Capitol Bldg.

May 21
Public Safety Communications Council
9am–3pm, Location TBA

May 27
Information Technology Advisory Council (ITAC)
8:30am-12pm, Rm 111, Metcalf Bldg.

May 28
Summitnet Executive Council (SEC)
1:30-4 pm, DPHHS Auditorium-METNET Site

June 3
Information Technology Managers Council (ITMC) 8:30–10:30am, Rm 111, Metcalf Bldg.

METNET Interactive Video

An increase in usage, new equipment on the horizon, expanded alliance utilization, and our web site, highlight the news for the METNET Interactive Video System. University level classes have increased their reach by using METNET, and additional state agency and judicial uses are making the system a useful asset to Montanans. The current monthly average is 105 conferences, with billings of 250 to 350 hours. A few years ago it was 10 to 25 hours a month.

METNET has 14 official sites, but thanks to team work, there are now alliances with four telemedicine/ telepsychiatry networks, allowing access to 18 additional communities in Montana.

Until last fall, all METNET video locations were equipped with Compression Labs, Inc. (CLI) compressed digital video products. VTEL Corporation and CLI have merged, retaining the name VTEL. For now, METNET technicians will be installing VTEL systems to expand or upgrade. The new VTEL systems, and the support that Williams Communications Solutions and VTEL have, exceed our expectations. VTEL equipment is high-end PC based, and can easily upscale to the new service offerings that are envisioned in the future.

The METNET Interactive Video Web page is a valuable resource to our users and potential users. You can find it on the Web at **http://www.state.mt.us/isd/metnet/index.htm**. It can be used to

- find where our sites are located
- find our pricing structure
- find what our network is like

In the future, our site can be used to find out about courseware and informational video conferences. It could become a good tool for educators and public servants to get their "products" advertised. (Carried on METNET)

For more information contact Rick Wine of the Telecommunications Bureau at 444-3517, ZIP! or e-mail at rwine@mt.gov.

METNET
Montana Educational Telecommunications Network

ISD MAGSTAR Trek

ISD has purchased and installed an IBM 3590 MAGSTAR tape drive unit for the state mainframe. With a name like MAGSTAR, you know it has to be something beyond the ordinary. Indeed, it is. The MAGSTAR unit is part of the IBM 3590 High Performance Tape Subsystem. Its highlights are high storage capacity and enhanced performance capabilities.

This subsystem is a continuation of the service provided by the 3490E subsystem that ISD has had in production for several years. Nonetheless, there is no physical compatibility between the two. A 3480/ 3490 cartridge cannot be loaded into a 3590 drive, nor can a 3590 cartridge be loaded into a 3480/3490 drive. However, data can be transferred between the 3590s and any other I/O device connected to the mainframe.

Considering the physical shape and size of the 3590 cartridge is about the same as 3490 cartridge, the storage capability of a 3590 cartridge is pretty amazing.

- The cartridge is written in a 128-track format as opposed to the 36-track format of the 3490E cartridge.
- The 3590 drive will actually write 16 tracks at a time, making four "round trips" from physical beginning to physical end of tape and back again.
- Given this number of tracks available, the 3590 cartridge can hold 10GB of uncompacted data and 30GB of compacted. This compares to 2.4GB of compacted data on a 3490E cartridge. All of this on about 300 meters of media shoved into a 4" x 5" cartridge less than one inch thick!

With all this storage you might think it would take forever to transfer all that data to the cartridge. It will take some time, but not as long as a 3490E. The 3590 MAGSTAR subsystem will read and write data at 9 MG/second, a rate three times faster than the 3490E. This is reading or writing about 16 tracks of information at two meters of media per second.

The enhanced storage capacity of the MAGSTAR system can be beneficial in several areas. Assuming that each cartridge is being filled with data, the floor space required to store a tape library is cut up to 75%. Virtual tape storage becomes a possibility, complete with "lights out" tape processing where the cartridges are kept in storage silos and loaded into the drives by

a robotic device. Vaulting becomes less of a hassle since fewer cartridges will need to be stored and tracked. While none of these changes have taken place, they will be considered as the MAGSTAR usage increases.

What type of application would be a good MAGSTAR candidate? High capacity cartridges serve no purpose if they are not filled. A 10GB cartridge is no better than a 2.4GB if it contains only 1GB of data. So a good candidate would be one with very large data requirements, for example, an application which creates a dataset which fills two or more 3490E volumes. Stacking frequently accessed files on a large capacity cartridge might not be a good use. Other non-mainframe platforms can be backed up on the MAGSTARs, affording the user all the safeguards and conveniences of the mainframe tape management system.

To date, the ISD MAGSTAR unit is dedicated to backing up the files on the State of Montana MTPRRIME mid-tier computer. However, as the need arises, current and future units will be available for applications needing the enhanced storage capabilities.

For more information contact Bill Ramsay of the Computing Operations Bureau at 444-2902, ZIP!, or e-mail at bramsay@mt.gov.

ITMC Approves New Database Standards

The Information Technology Managers Council met April 1, 1998 and took action on two major issues.

Desktop Database Subcommittee Recommendations. The Council received a report outlining the recommendations of the Desktop Database Subcommittee. The recommendations follow:

1. Microsoft Access become a state standard desktop database
2. Microsoft Visual Basic become a state standard programming language
3. Lotus Approach remain a state standard desktop database

The subcommittee also prepared guidelines for the appropriate selection and use of the state standard databases and application development tools based on criteria such as need for enterprise access, mission criticality, number of users and the size of the database.

The recommendations were approved unanimously. A full copy of the subcommittee's report is located on the ISD Value Added Server (VAS) at **guest\itmcinfo\recommend.wpd.**

Recruitment and Retention Subcommittee Report. The Subcommittee presented its *Report on Recruitment and Retention of State Information Technology Professionals* to the Council for its endorsement before submitting it to Lois Menzies, Director of the Department of Administration. The report makes four recommendations:

1. **Retain Pay Exception for IT Positions.** The pay exception issued in September 1997, to address retention problems for existing employees, should remain in effect.
2. **Implement Immediate Grade Level Adjustments.** Using the existing pay plan, IT employees could be granted a salary increase equivalent to one pay grade.
3. **Develop and Implement a Market Based IT Broad banded Pay Plan.** Based on efforts currently underway in the State Personnel Division, a broad banding IT pay system should be researched, developed and implemented
4. **Study Additional Strategies for Recruiting and Retaining IT Professionals.** Study and propose additional improvements in the state's employment package in the areas of recruitment, benefits, work environment, career development and recognition.

The Council unanimously endorsed the report. Full copies of the report may be found on the ISD VAS at **guest\itmcinfo\recr&ret.sub\ret&rec.wpd**.

In other business, the Council received an update on the MT PRRIME project from Jim Sheehy; an update on the Exchange e-mail project from Wendy Wheeler; information from Mike Randall on how ITMC will be involved in the ITAC strategic planning process and more. Minutes of the meeting are available on the ISD VAS at **guest\itmcinfo\minute98** or from Kim LaRowe (klarowe@mt.gov) of ISD at 444-2700.

Oracle Designer/2000 Overview

Designer/2000 is a powerful application design tool used for process modeling, analysis modeling, designing and generating Oracle applications. Designer/2000 provides the user with toolsets designed for analyzing business requirements and building systems that meet a department's needs.

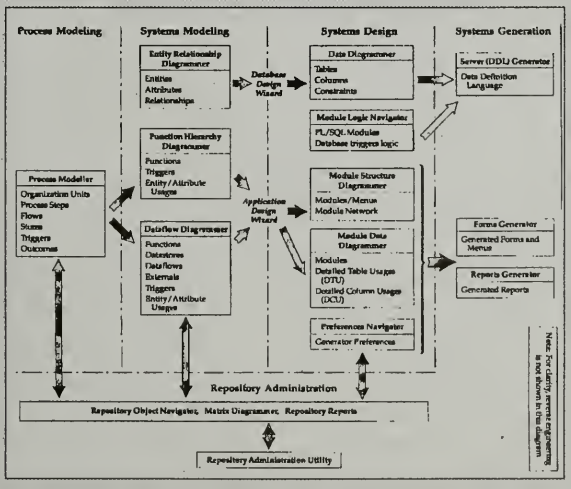
There are five basic toolset groups that developers need to be familiar with.

1. The **Process Modeller** is a graphical model used for illustrating a business process. It can support sound files, movies, and bitmaps. It also supports timelines and will determine a critical path for a set of processes.
2. The **Systems Modeller** gives a detailed description of the department requirements with the use of the entity relationship diagrammer, the data flow diagrammer and the function hierarchy diagrammer.
3. The **Systems Designer** records a detailed description of the system design. The environment it creates is developed for system engineers and/or designers.
4. The **Generator** products (Forms, Reports and Server) use the definitions recorded in the Repository and create complete systems comprising server-side components and client-side applications.
5. The **Repository Administrator** is a tool used to install, upgrade and maintain the repository of application information. The Repository Object Navigator (RON) is a graphical browser used for definitions. The RON defines the business units in an organizational chart. It also records details of objectives, aims, critical success factors and key performance indicators for the business units. The Matrix creates grids to show relationships between objects in the repository.

The diagram gives a step by step example of how Designer/2000 is implemented. Some steps may he omitted depending on the business requirements and its users. For example, some applications may not require the Process Modeller and its illustrating abilities.

There are Designer/2000 Media Based Training courses available. For more information, see the MBT article in this issue.

For information or assistance on using Oracle Applications, contact the Systems Support Bureau: Barry Fox at 444-5895, ZIP! or e-mail at bfox@mt.gov; Steven St. John at 444-2910, ZIP! or e-mail at sstjohn@mt.gov; Tony Noble at 444-2922, ZIP! or e-mail at tnoble@mt.gov.



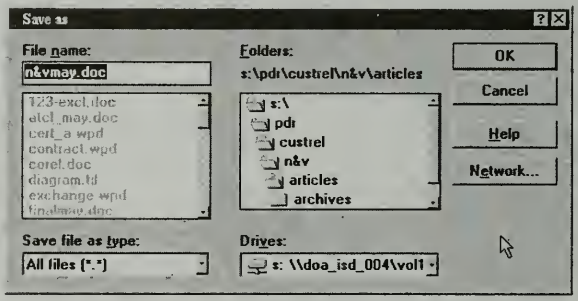
ZIP! Tips ◦ Proper Format for Attachments

The ability to send files via e-mail is vital to state government business. With the rollout of Microsoft desktop software products, you may be receiving Word and Excel files along with WordPerfect and Lotus documents. With different document versions being created among various agencies, it is imperative that everyone sends documents that can be read by the recipient to maintain the integrity of e-mail's capabilities. Therefore, until everyone is converted to the same product, you should use a format that you know the recipient can handle. If you are unsure, or if you are sending to a mixed audience, it's probably best to attach two copies (both old and new formats).

Many users, viewing Word files in ZIP!Office, may notice it displays quite differently than how it would in Word. Your e-mail package's role is to send the document from one user to another. ZIP!Mail/ZIP!Office's viewer attempts to display the file for your viewing. However, the viewer is simply displaying what it was able to translate from the document and consequently can not interpret some (or all) of the formatting codes. Some files simply can't be viewed in ZIP!. In these cases, you need to copy the file to a DOS subdirectory and open it in the corresponding software package. To do this, highlight the attachment in your intray. Click on **E**dit, then **Copy to DOS file.** The window below appears.

In this window, you can choose where to store the file. To retrieve it, open the software package the file was created in and view, edit or print it from there. Remember, even though ZIP! has some capabilities that may allow you to view the document, it is NOT a word processor. We'll investigate different options during the testing phase of the Microsoft Outlook rollout as we look at coexistence requirement options.

If you have any questions on exchanging files via ZIP!, contact Sue Skuletich of the Systems Support Bureau at 444-1392 ZIP! or e-mail at sskuletich@mt.gov.



Sending Attachments to Internet Users

We've been experiencing problem calls regarding the ability to send attachments to Internet users.

When preparing to send an attachment, you must fill in the subject line, the body of the message and add the attached file before sending. If you neglect to fill in any text in the body, you will receive a ZIP! message containing the following error:

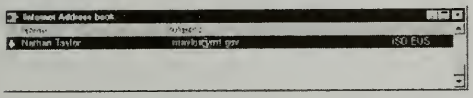
Sender: docj@mt.gov
Sendto: -SMF71-@INTERNET.mt.gov
Error: Authoritative name error
Status: Reported by name server 161.7.218.10
Delivery of the message has been cancelled

The Internet gateway cannot handle an attachment unless there is text in the body. This text message can be as simple as "Enclosed is the XYZ document" Without any text, you can expect a ZIP! error every time.

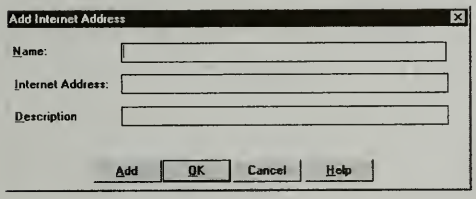
For additional information or questions regarding ZIP!, please contact Lisa Carson of End User Systems Support at 444-1542, ZIP! or e-mail at lcarson@mt.gov.

ZIP!Office Sending Internet E-mail

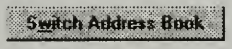
Awhile ago, functionality was added to ZIP!Office to allow users to easily send and receive Internet mail. Your Internet address book holds all your Internet mail addresses, and you're not required to use MHSTO lines. MHSTO lines are more prone to user error, and your Internet address book will be easier to use.



From the edit menu, you can select "Add address" and enter the names and address of people you communicate with.



After you have made entries in your address book, you can use them just like the internal address book. When you get ready to send a message, select the "Switch address book" button while viewing the address book, and you will see all your Internet addresses.



If you have any questions about ZIP!Office and Internet e-mail, please contact Nathan Taylor of End User Systems Support at 444-1548, ZIP!, or Internet e-mail ntaylor@mt.gov.

E-mail Support Procedures Who ya gonna call?

Now that the Exchange e-mail project is in full swing, the work pattern of the e-mail support group is changing. As we work on the planning, testing, pilot and finally deployment of the new e-mail system, we are frequently away from our desks in training classes, meetings, etc. The normal ways of contacting the e-mail support group that agencies have grown accustomed to won't work as well anymore.

Even though we're in the midst of this big project, support of current e-mail is still our #1 priority. We have procedures in place to ensure that we can be reached, as needed, so agency e-mail problems are handled promptly. The proper procedure for getting support is to call the ISD Customer Support Center at extension 2000. Please do not call our direct lines or send us e-mail when you need support. When calling the ISD Customer Support Center your problem will be entered into Service Center, assigned to the e-mail support group, and you will be given a problem ticket number. Rather than a voice or e-mail message sitting in a particular mailbox until messages are checked, when a problem is entered into Service Center an e-mail message is generated to every member of the e-mail support group. This helps us distribute the support calls to whoever is available and also builds a problem knowledge base for future reference. If your problem requires immediate assistance, requestors should alert the ISD Customer Support Center when the problem is opened. The Customer Support Center is sensitive to your request and will prioritize the problem. If the problem is a high priority, they can reach us at our desks or via cell phone.

If you have questions regarding e-mail support please contact Kyle Wynn of End User Systems Support at 444-2859, ZIP! or e-mail at Kwynn@mt.gov.

Personal Office Assistant

As more people begin to use the Microsoft Office products, they will notice several new Office Assistants running around the office. No, these Assistants are not new staff—they are the Office Assistants that come with the new Microsoft Suite! The Office Assistant provides Help topics and tips to help you accomplish your tasks. If your Office Assistant is not displayed, simply click on the icon at the end of your Standard toolbar that looks like the icon shown below. The following tips will help you get along with your new Assistant that will be sharing your PC with you.

Get Help, Tips, and Messages through the Office Assistant

The Office Assistant can answer your questions, offer tips, and provide Help for a variety of features specific to the Office program you are in. The Assistant can display:

- **Suggested Help** is relevant to the specific task you are performing and appears before you even ask for Help. For example, if you click the Assistant while you make changes to a table—with this option selected—the Assistant returns Help topics about how to work with tables. **Help with wizards** appears when you start a wizard. If you don't want Help, you can turn off Help with wizards.
- **Tips** point out how to use the features or keyboard shortcuts in the program more effectively. A tip is available when a yellow light bulb appears in the Assistant. Just click the light bulb to see the tip. If the Assistant is not visible when a tip arrives, the **Office Assistant** button displays a light bulb. Click **Office Assistant** to display the Assistant, and then click the light bulb to display the tip.
- **Messages** appear in the Office Assistant when it is turned on. You can choose to see your messages in the Office Assistant balloon or in a different dialog box.

All the Office programs share the Office Assistant. Any Assistant options you change, such as the types of tips the Assistant displays, affect the Assistant in all the Office programs. To display the Assistant after you display a Help topic, click anywhere in the Word window, or close the Help topic.

Help without Office Assistant

To get Help without the Office Assistant, choose **Help**, and then click on **Contents and Index**. To display Help without the Office Assistant when you press F1, click **Options**. (If the Options button is not visible, click the Assistant, and then click Options.) On the Options tab, clear **the Respond to F1 key** check box.

Hide or show the Office Assistant

- To show the Office Assistant, click **Office Assistant**. Simply click on the icon at the end of your Standard toolbar that resembles the icon shown above.
- To hide the Assistant, click the **Close** button on the Assistant.

How to Calm a Distracting Office Assistant

Some Office Assistants are more active than others. To choose a different Assistant, right-click the Assistant, and then click **Choose Assistant** on the shortcut menu. On the **Gallery** tab, click **Back** or **Next** to see the available Assistants. The Office Logo Assistant is the least active. The Assistants that are the most active and have the most frequent sounds are The Dot and PowerPup.

- To limit Office Assistant movements around the screen, click the Assistant, and then click Options. On the Options tab, clear the **Move when in the way** check box.
- To turn off Office Assistant sounds, click the Assistant, and then click Options. On the Options tab, clear the **Make sounds** check box.

The Office Assistant has two sizes. To change the size, position the mouse pointer over any Office Assistant

border until the pointer changes to a double-headed arrow. Drag the border to the size you want. To have the Assistant automatically change from the large to the small size after 5 minutes not in use, click Options. (If the Options button is not visible, click the Assistant, and then click Options.) On the Options tab, select the **Move when in the way** check box.

Having the Office Assistant show the Help topic you want

If the Office Assistant is not showing, click **Office Assistant**.

- For best results during a search for a Help topic, type a complete sentence or question, rather than a single word or phrase, in the Assistant. For example, to find Help on how to print more than one copy of a file at a time, type **Print more than one copy at a time**, not **print**.
- The Office Assistant only displays product Help topics when you are in the non-programming part of the product. And the Assistant only displays programming Help topics when you are in the programming part of the product.

To search for both product and programming Help topics while you are in the programming part of the product, click the Assistant, and then click Options. On the Options tab, select the **Search for both product and programming Help when programming** check box.

To display the Assistant after you display a Help topic, click anywhere in the Word window, or close the Help topic.

These are just a few tips to help you in your use of, and your conversion to, the new Microsoft products. Other tips can be found by consulting your Office Assistant. For more information concerning this article, contact Irvin Vavruska of End User Systems Support at 444-6870, ZIP!, or e-mail at ivavruska@mt.gov. For questions about the new Microsoft Office Suite, please contact your agency support staff, your Office Assistant, or the ISD Customer Support Center at 444-2000.

Microsoft Office 97

The State has chosen Microsoft Office 97 Suite as the new desktop software standard, and has begun the process of rolling out this software to all desktops. Not everyone has Office 97 and its associated programs, and won't for some time. The movement of all state users to the Suite will take up to two years, with individual agencies moving at different rates and at different times. Until all users have been moved to Office, it is important that users who have it restrict the use of Word, Excel, or PowerPoint. Users who currently have Office 97 installed should limit themselves to using the Office applications only to create files that are not going to be shared outside their organizational unit, assuming that all users in their unit have Office 97 as well. This is necessary because file conversions between Word and WordPerfect; Excel and 1-2-3; and PowerPoint and Freelance; work for simpler smaller files, there are major difficulties in converting files that are large or use advanced features. For details on these problems, check in the Help options for each Office application, or in the Office 97 Resource kit.

File conversions work for simple, small files, but there are major difficulties in converting large or advanced feature files.

There are also problems with ZIP!Office and its lack of support for viewing Word file formats. See the article on ZIP! and file formats in this month's issue of *ISD News & Views*.

Be sure to contact your supervisors to arrange attendance at Office 97 training at the Helena College of Technology.

If you have questions about this article contact Denny Knapp of End User Systems Support at 444-2072, ZIP! or e-mail at dknapp@mt.gov. If you need technical support contact the ISD Customer Support Center at 444-2000.

WordPerfect Macros to Microsoft Word

Converting Using Visual Basic for Applications

Part 1 of 5

This article describes the methodology, approach, and requirements for converting macros developed for various versions of WordPerfect to Visual Basic® for Applications in Microsoft® Word. Because of the complexity of macros, there's no automatic conversion utility available for converting macros from WordPerfect to Visual Basic for Applications. This document will help you understand the differences between the programming languages used by WordPerfect and Word, and how to successfully re-record or rewrite your WordPerfect macros for use with Word.

Some basic familiarity with both WordPerfect and Word is assumed. This article doesn't describe the principles of programming for either WordPerfect or Word. If you aren't familiar with the Word or WordPerfect programming languages, you should learn basic concepts of each language before attempting to convert your WordPerfect macros.

This article provides only a rudimentary discussion of programming using Visual Basic. You may want to augment your study of Visual Basic using Microsoft Office 97 Help.

TECH TALK

Supported Versions

WordPerfect's macro language differs from version to version of WordPerfect. This document describes converting macros from two WordPerfect versions: WordPerfect 5.1 for DOS, and WordPerfect 6.1 for Windows. If your WordPerfect macros are from a different version of WordPerfect, you may still be able to convert them, but there may be issues to consider.

- The macro language in WordPerfect 5.0 for DOS is identical to that in WordPerfect 5.1 for DOS, except it contains fewer commands. For all practical purposes, a WordPerfect 5.0 for DOS macro can be considered the same as a WordPerfect 5.1 for DOS macro.
- Versions prior to WordPerfect 5.0 for DOS lacked a programming language, and are therefore not a topic of interest in this document.
- WordPerfect versions 6.0 and 6.1 for DOS use a different macro language than WordPerfect 5.1 for DOS and WordPerfect for Windows. Conversion from WordPerfect 6.0 and 6.1 for DOS are not detailed in this document.
- WordPerfect versions 6.0, 6.1, and 7.0 for Windows are identical except for slight variations in syntax and command availability. For the purposes of this document, they are considered to be the same version.
- WordPerfect 5.1 and 5.2 for Windows uses a now-abandoned macro programming dialect. While the language is similar in some respects to the macro language of WordPerfect 6.1 for Windows, there are substantial differences in the command syntax. For this reason, and since these versions haven't been commercially sold for years, converting macros from WordPerfect 5.x for Windows is not detailed in this document.

Introduction

Macros are commonly used for automating office tasks – using desktop applications to do more in less time. Typical automated office tasks are inserting common blocks of text into documents, formatting documents in a specific style, and automatically assembling larger documents from smaller documents.

Unlike documents, which can often be converted between different word processors using a conversion "filter," macros are really miniature programs and cannot be readily converted. If you have macros that you've recorded or written for WordPerfect, they'll need to be re-recorded or rewritten for use with Word. The difficulty in re-creating automated WordPerfect office depends on the complexity of the original macros. Simple macros are easy to re-create in Word.

Word 97 includes Visual Basic 5.0, a sophisticated development environment that is shared across Office applications: Word, Microsoft Excel, Microsoft PowerPoint, and Microsoft Access. Visual Basic is also part of the Microsoft Visual Basic product and Microsoft Project. Visual Basic is also licensed to other software companies. Visual Basic goes beyond being merely a macro language – it is a full-featured programming development environment. Throughout this document, we'll refer to "macros" in Word as Visual Basic code.

The Conversion Process

Converting macros from WordPerfect to Visual Basic is a six-step process.

1. Examine the purpose of the WordPerfect macro.
2. Determine if a macro is needed, or if Word can handle the job using another built-in feature, such as AutoText or forms.
3. Chart the flow of the macro to define its important routines.
4. In Word, record one or more macros that duplicate the functionality of the original macro.
5. If necessary, modify the recorded macros and manually add additional programming instructions where necessary.
6. Test the finished Visual Basic code.

Step 1: Examining the Purpose of the Macro
You must fully understand the purpose of the WordPerfect macro before it can be successfully converted. If possible, run the macro on a copy of WordPerfect or view the macro in WordPerfect's macro editor. This will give you a better understanding of what the macro does.

Take note of any documents that the macro uses or produces. Word versions of these documents may be needed when the macro is converted to Visual Basic.

Step 2: Determine if a Macro is Needed
Sometime it's not necessary to replicate a WordPerfect macro in Word, especially if the macro performs a rudimentary formatting function, such as applying bold and underlining to text (this task can be easily handled using Word styles). The Word interface and other features, make many of these simple macros unnecessary. See the "Deciding When a Macro Isn't Needed" article in a later issue of *ISD News & Views.*

Step 3: Chart the Flow of the Macro
Simple macros do a specific job and nothing more. Complex macros may perform several tasks in a particular order depending on external conditions. If a macro performs a number of steps during its execution, create a simple flowchart that outlines each step. Include any pauses in the macro for user input, such as answering Yes/No questions or typing text. The instructions that create these pauses need to be manually added to the recorded Word macro.

Step 4: Record Duplicate Macros in Word
There are hundreds of properties, methods and objects available in Visual Basic. Learning them all is a daunting task. The most time efficient approach to macro conversion is to record duplicates of your WordPerfect macros using Word's macro recorder. You can view the Visual Basic instructions, which can be assembled into larger macros, using copy and paste.

Step 5: Modify the Recorded Macros
You can use your recorded Word macro as-is or use the code to build larger macros. You may need to record short segments that duplicate the original functionality of the WordPerfect macro, and then combine these instructions with additional instructions you manually add to build the finished macro. For example, you may add instructions that prompt a user for input, such as asking if the user wishes to perform a certain task.

For more information on recording macros in Word, see "Revising recorded Visual Basic macros" in Word Visual Basic Help (use the **Find** tab to locate the topic).

Step 6: Test the Finished Product
Test your new Visual Basic code to make sure it duplicates the functionality of the original WordPerfect macro. If the WordPerfect macro created a document or some other output, compare the output generated by Word with the output generated by WordPerfect.

Note: While you're converting macros to Visual Basic, look for ways to make them better. This is especially valuable when converting WordPerfect for DOS macros. WordPerfect for DOS imposed a number of restrictions on macro programmers, such as limited access to disk and file services, only two documents open at once, and no built-in user interface tools like message boxes. Visual Basic doesn't have the same limitations. Before converting your WordPerfect macros, consider adopting the new features and functionality available in Visual Basic.

This article adapted from Microsoft Technical support documentation.

For more information about this article, contact Jerry Kozak End User Systems Support at 444-2907, ZIP! or e-mail at jkozak@mt.gov. For user support, contact the Customer Support Center at 444-2000.

Converting Lotus 1-2-3 to Excel 97

Part 1

There are general differences between Microsoft Excel 97 and Lotus 1-2-3. This series of articles contain information on the following topics:

1. Converting Worksheets
   Limitations of Converting Worksheets
2. Formulas
   General Syntax Differences
   Formula Calculation Behavior
   Mathematical Order of Precedence
3. Worksheet Functions
   Differences Between Lotus 1-2-3 and Microsoft Excel
   Microsoft Excel Equivalent Functions
   Microsoft Excel Functions That Have No Equivalent
4. Moving Around the Worksheet
5. Linking Lotus 1-2-3 and Microsoft Excel Worksheets
6. Macro Compatibility

Converting worksheets between Lotus 1-2-3 and Microsoft Excel

To open a Lotus 1-2-3 file in Microsoft Excel, use the following steps:

1. On the File menu, click Open.
2. In the Files of type box, click Lotus 1-2-3 Files (*.wk?).
3. In the Look in box, double-click the drive or folder that contains the workbook.
4. Double-click the workbook.

Limitations of converting Lotus 1-2-3 files to Microsoft Excel

Microsoft Excel 97 cannot open a Lotus 1-2-3 worksheet that is protected with a file-level password. However, Microsoft Excel can open a file that is protected at the worksheet level. For additional information, please see the following article in the Microsoft Knowledge Base: "Cannot Import Password Protected WK3 or WK4 Files." **(http://www.microsoft.com/support/)**

Lotus 1-2-3 version 5.0 for Windows allows you to export your files as Microsoft Excel (.xls) files. However, Microsoft recommends that you use the converter provided with Microsoft Excel to read Lotus 1-2-3 worksheets. After you open the worksheet, save it in the Microsoft Excel format.

When you open a Lotus 1-2-3 worksheet or workbook in Microsoft Excel 97, Microsoft Excel applies the formatting in the associated .fmt, .fm3, or .all file. Be sure the associated .fmt, .fm3, or .all file is stored in the same folder as the .wk? file. If you save a Lotus 1-2-3 file in the Microsoft Excel format, Microsoft Excel saves the spreadsheet data and formatting in a single workbook file.

You can convert multiple Lotus 1-2-3 files to the Microsoft Excel format by using the File Conversion Wizard. To use the wizard, point to Wizard on the Tools menu and click File Conversion Wizard. If this command is not listed, install the File Conversion Wizard add-in.

Conversion Notes: When you open a Lotus 1-2-3 worksheet in Microsoft Excel, the Transition formula evaluation and Transition formula entry check boxes (click Options on the Tools menu) are automatically selected for that sheet. This ensures that Microsoft Excel calculates the formulas according to the listed Lotus 1-2-3 behavior. These options also allow you to type formulas with the @ symbol. For additional information, please see the following article in the Microsoft Knowledge Base: "How Transition Formula Entry Affects Behavior in MS Excel."

If you save a Lotus 1-2-3 worksheet in the Microsoft Excel worksheet format, the Transition formula evaluation and entry check boxes remain selected for that workbook until you clear them.

Formulas

You can open Lotus 1-2-3 files in Microsoft Excel 97; however, Microsoft Excel calculates some formulas and functions differently from Lotus 1-2-3. Also, you use a different syntax when you create a formula in Microsoft Excel.

General Syntax Differences

- In Microsoft Excel, start a formula with an equal sign. As in Lotus 1-2-3, you can also start a formula with a plus sign or a minus sign.
- Although it is not required, you can also type an @ sign before a Microsoft Excel function.
- In Microsoft Excel, use a colon to denote a range of cells. In Lotus 1-2-3, use periods.

Formula Calculation Behavior

Microsoft Excel calculates formula and database criteria differently from Lotus 1-2-3. However, you can force Microsoft Excel to calculate formulas as Lotus 1-2-3 does.

To calculate formulas the way Lotus 1-2-3 does, use the following steps:

1. On the Tools menu, click Options.
2. Click the Transition tab.
3. Click Transition Formula Evaluation, then OK.

Note: The Transition Formula Evaluation check-box is not automatically selected when you open a Lotus 1-2-3 file in Microsoft Excel.

Calculation Differences

In Lotus 1-2-3, when a cell that contains text is used in a formula, Lotus 1-2-3 assigns a value of 0 (zero) to the cell. In Microsoft Excel, you cannot combine text and numeric entries in the same formula. However, when you use a worksheet function in Microsoft Excel, Microsoft Excel assigns a value of 0 for cells that contain text. For example, if you clear the Transition Formula Evaluation check box, and you type text in cell A10 and the value 100 in cell B10; the formula =A10+B10 returns the error value #VALUE! However, the worksheet formula =SUM(A10,B10) returns the value 100.

Lotus 1-2-3 evaluates Boolean expressions to 0 or 1 and displays 0 or 1 in the cell. For example, in Lotus 1-2-3, the expression 2<3 displays 1 in the cell to represent True; Microsoft Excel displays TRUE or FALSE in the cell. If you select the Transition Formula Evaluation check-box, Microsoft Excel displays 0 for FALSE and 1 for TRUE.

Database criteria ranges are evaluated differently when you extract data, find data, and use database functions. For example, the criteria "John" finds only rows with cells that contain "John." If you clear the Transition Formula Evaluation check box, the criteria "John" finds any rows that contain cells with values beginning with "John"; for example, cells that contain "John," "Johnson," and "Johnsen" are found.

Some functions, including @MOD, @VLOOKUP, and @HLOOKUP, are evaluated differently. For example, the @VLOOKUP function in Lotus 1-2-3 looks for an exact match in the first column; the VLOOKUP worksheet function in Microsoft Excel assumes the first column is sorted and finds the closest value in the first column without exceeding the lookup value. The VLOOKUP and HLOOKUP worksheet functions in Microsoft Excel include a fourth argument, range_lookup. If you set this argument to FALSE, Microsoft Excel looks for an exact match.

Caution: Avoid alternately selecting and clearing the Transition Formula Evaluation check box. If you do this, the values calculated on your worksheet may be changed.

If you have any questions regarding this article contact Brian Divine of End User Systems Support at 444-2791, ZIP! or e-mail at bdivine@mt.gov. If you need user support, please contact the Customer Support Center at 444-2000.

Converting WordPerfect 6.1 to Word 97

Label and Data files

It's official, as most of you know, we will be moving our desktop applications to Microsoft's Office 97. This is the first in a series of articles that will help you make the transition from our old desktop standards to Office 97. This article will focus on WordPerfect Label and Data files and will be divided into two parts:

- **Part I:** Converting WordPerfect Labels to a Word Data Document
- **Part II:** Using the Mail Merge Feature to Create Labels.

In WordPerfect, labels use a custom paper size. This custom size makes it tricky to use WordPerfect labels in Word. This article will help you quickly convert these WordPerfect labels into a Word data document. After you create the Word data document, you can use the Mail Merge feature to create labels in Word.

Let's start by assuming you have already created a label document (*.DAT) in WordPerfect 6.1, and now you are working in Word 97. When you open a WordPerfect label document (the *.DAT file) in Word, it will resemble the following:

Name¶
Address¶
City, State--ZIP¶
----------Page Break----------
Name¶
Address¶
City, State—ZIP¶
----------Page Break----------
¶

Note: If you do not see the paragraph symbols, click on the Show/Hide button on the Standard toolbar.

To modify this converted WordPerfect document so that you can use it to create labels in Microsoft Word, use the following steps:

1. With the converted WordPerfect document visible, click Replace on the Edit menu. The Replace dialog box will appear.
2. In the Find What box, type ^p (to create the ^ character, press SHIFT+6). In the Replace With box, type ^t, and then click Replace All. This step replaces all the paragraph marks in the document (designated by ^p) with tabs (designated by ^t). When Word finishes making these replacements, a dialog box appears stating how many replacements were made. If you have Office Assistant running your message will come from the Assistant.
3. Click OK, if you don't have Office Assistant running or if you have Office Assistant running, click on the Find & Replace dialog box.
4. In the Replace dialog box, in the Find What box, type ^b. In the Replace with box, type ^p, and click Replace All. This step replaces all of the manual section/page breaks (designated with ^b) with paragraph marks.
5. When Word makes all the replacements, click OK then Close, or if you have Office Assistant active, just click on Close in the Find & Replace dialog box. The data will now look similar to the following:

   Name > Address > City, State > ¶
   Name > Address > City, State > ¶
6. On the Edit menu, click Select All.
7. On the Table menu, click Convert Text to Table. The Convert Text to Table Dialog box will open,
8. Select Separate Text at Tabs, the number of columns should change to reflect the number of fields in each record. Click OK.
9. Click the mouse button to clear the selection.
10. Place the insertion point anywhere in the last (blank) column, click the right mouse button, and click Delete Cells. The Delete Cells dialog box will appear.
11. Select Delete Entire Column, and then click OK. The surplus column will be removed.
12. Press CTRL+HOME.
13. Type appropriate field headings for each of the fields. Your document should now resemble the following:

Name	Address	City
Name	Address	City, State, Zip
Name	Address	City, State, Zip

14. Select FILE, SAVE AS and save the document as "{filename}.doc". {filename} is your preferred name for this file. Close the document.

Congratulations! You have successfully created a Word data document.

If you have any questions or need help with this issue, contact Mike Moller of End User Systems Support at 444-9505, ZIP! or e-mail at mmoller@mt.gov.

Cacheman - Windows 95/NT Freebie

The biggest fault of Windows95 is the disk cache management. It takes almost all of the available physical memory for speeding up the hard drive. When the system runs out of RAM Windows starts to use virtual memory instead of flushing the caches. To change this crazy behavior you have to edit the system.ini file. Cacheman is a GUI based tool used to calculate the optimal cache size and change the mentioned .ini file. The result is a much better system performance especially on computers with less than 64Mb of memory.

Cacheman is Copyrighted (c) 1997 by Thomas Reimann. All rights reserved. (VERSION 1.0)

If you would like a copy of Cacheman the files are available on the ISD Value Added Server at **\guest\windows\winaddon\95addons\cacheman.** If you don't access to the VAS, contact Denny Knapp of End User Support at 444-2072, ZIP!, or e-mail at dknapp@mt.gov.

RFP/Contracts

Data Entry Services Contract with M.A.R.S. Stout

The current contract with M.A.R.S. Stout expires June 30, 1998. The original contract period was February 1, 1994 to June 30, 1995 and could be extended for a total of five years ending February 1, 1999.

Agencies who currently use or have used the contract were surveyed in early March. Out of six agencies currently using the contract regularly, only Fish Wildlife & Parks wanted ISD to rebid the contract. Two agencies said not to rebid and three did not respond to the survey. None of the three agencies using these services on a periodic basis answered the survey.

For the sake of FWP, the contract will be renewed through January 31, 1999, the maximum 5-year extension period. Before expiration, FWP will conduct their own rebid process, with assistance from ISD, to get a data entry service provider.

Electronic Document Management and Imaging Services (EDMIS) Contract

An Imaging planning meeting was held on March 18. In attendance were the EDMIS Committee, ISD Bureau Chiefs, the Contractor (KPMG-Peat Marwick) and approximately 30 agency personnel. Discussion included Fiscal Year 00/01 planning for imaging systems, records management and the EDMIS term contract. We also heard from several agencies about their successful imaging projects. Anyone interested in EDMIS planning and activities should call Brett Boutin at 444-0515.

PC Term Contracts

The Compaq-Digital merger and term contract

With the upcoming merger of Digital Equipment Corporation and Compaq Computer Corporation, there are some concerns regarding the status of the state's term contract for Digital PC products. We have a letter from Digital offering assurance regarding our Term Contract.

The current term contract is renewable on an annual basis, and is currently renewed through May 1999. Each year the contract is voted on to be renewed or rebid. If the state chooses to continue renewing the contract, it can only do so through May 2001. This is the absolute end of the contract, and the state will rebid the PC term contracts by then. Digital Equipment Corporation has assured the state that for the remaining renewable periods of the contract, the state will continue to have Digital branded personal computer systems available for purchase. Digital will also continue to service any equipment purchases via this contract for no less than five years after purchase, subject to standard warranty terms and conditions.

For further questions contact Brett Boutin of the Policy, Development and Customer Relations Bureau at 444-0515, ZIP! or e-mail at bboutin@mt.gov.

PowerPoint Made Easy!

Delivering presentations can be very stressful. Being prepared, by having a concise message, can greatly reduce that stress. Before putting content into your presentation you may want to create an outline. You can organize your thoughts by asking these simple questions:

1. **What is the purpose of this presentation?** This may sound simple, but it's important. Answering this question can help you design slides that are to the point. Without a purpose it's like playing basketball without a hoop; you just run all over the place and tire everyone out.
2. **Who is the audience?** Are they technical or non-technical? Are they familiar with the subject or do you need to give them the fundamentals first?
3. **What do I want them to know or do after they see my presentation?** If you can imagine a perfect reaction to your presentation, what would it be? If, for example, you would like the audience to start using Voice Mail, you would tell them the benefits but you would also tell them how to get training and sign up for it.

Text slides

Bulleted text slides should not have a lot of words. Think of them as highlights that will augment what you are saying. Don't try to put your entire message, word for word, onto the slide. Resist the urge to use the slides as notes for yourself. Above all, do not read the bullets to your audience. A good way to create bulleted text is to write out, or outline your script, and then take a highlighter and mark the words or phrases that are the key points to your message.

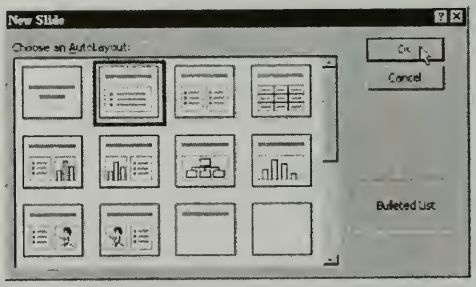
> **Do not read the bullets to your audience.**

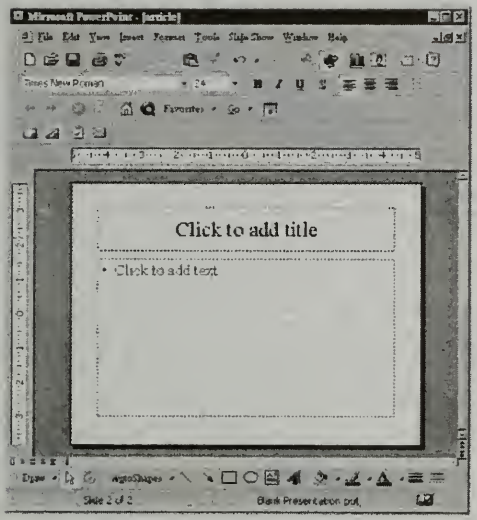
Now that you know *why* you are creating and delivering this presentation, let's work on actually *doing* it.

We'll begin where we left off last month. Using any of the methods described before, start PowerPoint, open a blank presentation, and create a title slide. Now, we'll add to our presentation. After you've entered the title and subtitle, we'll create a bulleted text slide.

Looking at Figure 1, find the cursor arrow pointing to the New Slide icon. Click on the icon.

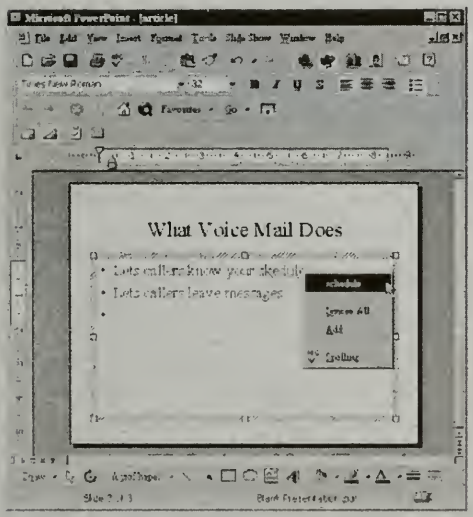
Notice that the bulleted text selection is already highlighted.





Click OK or double-click the highlighted icon. The first bulleted slide is now ready for a title and bullets.

There are many ways to enter the content. This is Slide View, which shows you how your slides will look. You can also use Outline View by clicking on that icon. In Figure 3, I have put a rectangle around the area.



The icons are, left to right, Slide View, Outline View, Slide Sorter, Notes Pages, Screen Show. If you hold the cursor over any icon in any Office application, its name will appear. You can also choose these from the View menu. For now let's work in Slide View.

Click inside the Title box and enter a title. Then move your cursor to the Text box and click inside the box. A good rule of thumb is the **7x7 rule.** No more than seven words per line, no more than seven bullets per slide. After you have entered your text, let's create another bulleted text slide. You have a few choices. You could repeat the process, new slide etc. or you could save a few steps by using the keyboard. Ctrl/Shift/M will test your dexterity, but saves a lot of time. Now you have a window that looks like Figure 2. Another shortcut is to go to Insert|Duplicate Slide or Ctrl+Shift+D. This is useful if you are making two slides that are very similar because you can simply modify the second one.

Enter another title and bulleted text. This time intentionally misspell a word. You'll see a wavy red line under the word. This will also appear if you have spelled the word correctly but have an extra space between words. Or maybe you have entered something the system doesn't recognize like an acronym or URL. If the entire sentence is underlined it may be too long. Place the cursor on the word and right-click the mouse.

Click on the correct spelling and it updates your slide. This is a quick way to spell check as you go. Create more text slides using the different methods described then save the file, we'll work on it again next month.

Ways to Save

- File|Save, select a drive and folder, then name it.
- Click on the diskette icon (Second row from the top, third icon from the left)
- Ctrl\S

Next month we'll explore creating Organization Charts.

For more information about this article contact Trapper Badovinac of the Policy Development & Customer Relations Bureau at 444-4917, ZIP! or e-mail at tbadovinac@mt.gov. For user support, contact the Customer Support Center at 444-2000.

Media Based Training (MBT)

What is a Gateway? How do Routers work? What is a T1 line? What is a Relational Database? The answers to these questions and much more is waiting for you inside ISD's CBT/MBT library of courses. Most of the courses will take only a few hours of your time. They are self-paced so you can go back over any section as many times as needed.

- **A VCR is needed.** Most of the courses are delivered on video, but some are multi-media on CDROM. The information is presented in a professional manner using various teaching methods including diagrams and real life examples. The accompanying workbook provides the course in written form and after each section quizzes you on what has been covered.
- **Sign up.** Contact Trapper Badovinac or Diana MacDonald via ZIP! to request a course. They will need your name, phone number and agency.
- **Pickup.** Courses are available in Room 222 of the Mitchell Building, or we can deadhead the course to you.
- **How Long?** The checkout period for each course is two weeks. It's important that you return your course on time. These courses have become very popular and there is a waiting list on many of the courses.
- **What's Available?** The course description of each course can be found on the VAS at **guest\training\CT_Video\T3_VAS.rtf.**

  If you are an Approach user you can check on the current availability of any course by accessing the read-only file on the VAS at **guest\training\ CT_Video \videodb.apr** (password Montana).
- **How Much?** There is no charge.
- **Who is eligible?** Any state employee.

Each month *ISD News & Views* will highlight a course series and provide a description of its modules along with degree of difficulty and prerequisites.

Course Series: Introduction to Data Communication Networks

Course Code: 3.01.01

Course Title: *Basic Elements of Data Communications*

Basic Elements of Data Communications will introduce you to the components found in today's data communications environment. You will learn about the three basic elements in a data communications network: the transmission medium, DCEs and DTEs. The concepts of resource sharing, remote job entry and downline loading, are also explored. You will see the difference between a computing terminal and a simple or dumb terminal. In the end, you will build a basic communications system using these elements.

Prerequisites: A basic knowledge of the principle of data communications.

Technical Difficulty: 1 2 3 4 5

Estimated completion time: 1 hour, 30 min (Video: 45 min + Workbook: 45 min)

Course Code: 3.01.02

Course Title: *Data Communications Hardware and Software*

Data Communications Hardware and Software explains the role of computers in a network. You will explore the types of computers used and the differences between them. The internal components of a computer, including the CPU, memory and input/output devices will be explained. Basic software components such as the operating system, user applications and database managers will be explained. In addition to learning about the individual components, this course will show how they work together to form a data communications device.

Prerequisites: *Basic Elements of Data Communications* (3.01.01)

Technical Difficulty: 1 2 3 4 5

Estimated completion time: 1 hour, 30 min (Video: 45 min + Workbook: 45 min)

Course Code: 3.01.03

Course Title: *Binary Numbering System and Interchange Codes*

Computers are based on electronic circuits which have two states: on or off. Hence, instead of using the decimal system, computers use a much simpler counting method. *Binary Numbering System and Interchange Codes* will detail the steps involved in using various numbering systems and code charts. You will learn how to convert from decimal to binary and hexadecimal numbers. You will also become familiar with the terms bit, byte and word.

Finally, you will learn about interchange codes and how the binary numbering system can be used to represent the letters of the alphabet, numbers and control information. You will understand the ASCII coding system and how it relates to the EBCDIC and Baudot coding systems.

Prerequisites: *Data Communications Hardware and Software* (3.01.02)

Technical Difficulty: 1 2 3 4 5

Estimated completion time: 1 hour, 30 min (Video: 45 min + Workbook: 45 min)

Course Code: 3.01.04

Course Title: *Data Transmission Concepts and Telephone Lines*

The most common transmission medium is the telephone line since they are found practically everywhere. This course introduces you to the basics of data communications using existing telephone lines; both switched and dedicated.

Regarding dedicated lines, the course covers point-to-point, multi-point, and the idea of conditioning to improve transmission. You will see how the central office routes calls and the number of paths a call can take. You will learn about 2-wire and 4-wire lines, as well as simplex, half-duplex and full-duplex transmission. The advantages and limitations of each mode will also be discussed.

This course concludes by exploring some of the transmission limitations of telephone wires based on bandwidth, attenuation, noise and signal delay.

Prerequisites: *Binary Numbering Systems and Interchange Codes* (3.01.03)

Technical Difficulty: 1 2 3 4 5

Estimated completion time: 1 hour, 30 min (Video: 45 min + Workbook: 45 min)

Course Code: 3.01.05

Course Title: *DTE-DCE Interface and RS-232-C*

An interface manual is one of the most difficult publications to read and understand. *DTE-DCE Interface and RS-232-C* will give you a comfortable understanding of the term "interface." It explains the function of the RS-232-C interface in communication between DTEs and DCEs. A discussion of each pin in the RS-232-C connector will detail the types of signals that are exchanged between DTEs and DCEs. The course focuses on the most commonly used interface signals and gives you an in-depth understanding of their use.

After completing this course, you will be able to understand the technical aspects of an interface manual. RS-232-C or another type.

Prerequisites: *Data Transmission Concepts and Telephone Lines* (3.01.04)

Technical Difficulty: 1 2 **3** 4 5

Estimated completion time: 1 hour, 45 min (Video: 45 min + Workbook: 60 min)

Course Code: 3.01.06

Course Title: *Concepts of Data Link Control*

Concepts of Data Link Control cover how data communications is very similar to the way that people communicate over the telephone. The order in which data is exchanged and the formalities involved in sending a message from one computer to another is referred to as a protocol. Most protocols include a specification for data link control. This course will explore the functions of data link control, including framing, control and acknowledgments, error detection and recovery. This course concludes with a demonstration of how these functions are used during data communications.

Prerequisites: *DTE-DCE Interface and RS-232-C* (3.01.05)

Technical Difficulty: 1 **2** 3 4 5

Estimated completion time: 1 hour, 30 min (Video: 45 min + Workbook: 45 min)

Course Code: 3.01.07

Course Title: *Start-Stop Data Link Control*

This course will explain a specific data link control communications protocol that uses Start and Stop bits to control the transmission of data. You will learn about parity bits and how they are used to detect transmission errors. Synchronous and asynchronous transmission are compared and the functions of RS-232-C signals briefly explained. You will also be familiarized with the advantages and limitations of the Start-Stop DLC. This course concludes with an in-depth example of Start-Stop DLC using ASCII Control Characters.

Prerequisites: *Concepts of Data Link Control* (3.01.06)

Technical Difficulty: 1 2 **3** 4 5

Estimated completion time: 1 hour, 45 min (Video: 45 min + Workbook: 60 min)

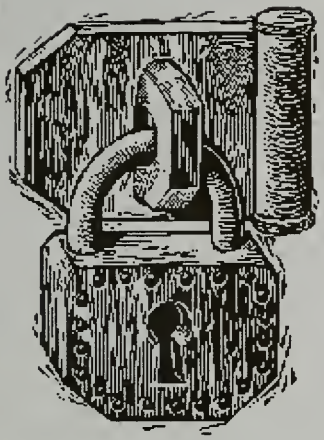
For more information about this article contact Trapper Badovinac of the Policy Development & Customer Relations Bureau at 444-4917, ZIP! or e-mail at tbadovinac@mt.gov.

Oracle Channel Classes

May

5	Designer/2000 Release 2 New Features
6	Object Database Designer: An Oracle8 Design Tool *PREMIERE*
7	PL/SQL 8 New Features
12-13	Oracle8 Architecture & Startup
14	Discoverer 3: Analyze Your Data Requirements
19	Financial Applications Release 11 New Features *PREMIERE*
20	PL/SQL 1: Coding Techniques
21	L/SQL 2: Database Level Application Programming

A full description for the each of the classes can be found on the Oracle Web site at **http://education.oracle.com/education/toc.** Because class material has to be ordered you must register at least two weeks before the scheduled class date. Please contact Barbara Clark at 444-0846, ZIP! or e-mail at baclark@mt.gov.



Computer Security Training for End Users

This is a two-hour seminar that covers the following:

- network security
- laws, rules, and policies
- login IDs and passwords
- viruses, hoaxes, and chain letters
- proper use of e-mail and the Internet
- user responsibilities

This training is held the third Thursday of each month from 8:30-10:30 am in room 13 of the Mitchell Building.

Date: Thursday, May 21

Time: 8:30-10:30 am

Location: Rm. 13, Mitchell Bldg.

For registration or more information, please contact Lois Lebahn (llebahn@mt.gov) or Kim LaRowe (klarowe@mt.gov) of ISD at 444-2700.

Training Calendar

This schedule has been assembled by the Helena College of Technology of the University of Montana. If you have any questions about enrollment, please call 444-6821. All classes will be held at the Helena College of Technology at 1115 N. Roberts. Please note that these costs are subject to change each July 1st.

The Helena College of Technology makes reasonable accommodations for any disability that may interfere with a person's ability to participate in training. Persons needing an accommodation must notify the college no later than two weeks before the date of training to allow adequate time to make needed arrangements. To make your request known, call 444-6821.

To enroll in a class, **you must send or deadhead an enrollment application** to the State Training Center, HCT, Helena, MT 59601. If you have questions about enrollment, please call 444-6821.

Once you enroll in a class, the full fee will be charged UNLESS you cancel at least three business days before the first day of class. HCT is also willing to schedule specific classes by request from state agencies.

	DATE	COST	DAYS
Data Base Classes			
Intro. to Oracle Prereq. Intro to Windows	May 18-19	170.00	2
Intro. to SQL Prereq. Intro to Oracle	May 21-22	170.00	2
Oracle Developer 2000, part I Prereq. Intro to Oracle & SQL	May 27-29	284.95 Paid by ISD*	3
PL/SQL Prereq. Intro to Oracle & SQL	June 17-18	170.00	2
Oracle Developer 2000, part II Prereq. Oracle Dev. I & PL/SQL	June 24-26	255.00 Paid by ISD*	3
Oracle Designer Prereq. Oracle Dev. I; PL/SQL recommended	Apr 30-May 6	461.95 Paid by ISD*	5
Lotus Approach Prereq Intro to Windows	May 14	85.00	1
Access 97 for Light Users Prereq Windows 95	June 22, July 21	85.00	1
Access 97 Prereq Windows 95	June 15-16, July 14-15	170.00	2
Data Network/Mainframe Classes			
Windows 95 Archit., Instal., Sup. & Tuning	June 8-9	500.00	2
NetWare 4.x Administration	May 11-15	425.00 Plus cost of book	5
Microcomputer Classes			
Windows 95 Conversion Prereq. familiar with Windows	May 11 (am), June 2 (am) July 6 (am)	42.50	1/2
Windows 95	May 4, June 1, July 1	85.00	1
ZIP!Office	June 23	FREE	1/3
Word 97 Conversion Prereq. Windows 95	May 11 (pm), May 13 (am), May 29 (pm), June 30 (am)	42.50	1/2
Word 97 for Light Users Prereq. Windows 95	May 20, May 28 June 3, July 16	85.00	1
Word 97 Prereq. Windows 95	May 6-7, May 14-15 June 8-9, July 7-8	170.00	2
Excel 97 Conversion Prereq. Windows 95	May 12 (am), May 13 (pm), May 29 (pm), June 19 (am)	42.50	1/2
Excel 97 for Light Users Prereq. Windows 95	May 27, June 26, July 17	85.00	1
Excel 97 Prereq. Windows 95	May 18-19, May 20-21 June 24-25, July 9-10	170.00	2
PowerPoint 97 Prereq. Windows 95	June 10-11, July 22-23	170.00	2

Prerequisites may be met with consent of Instructor
*** The Oracle Designer and Developer class fees are recovered through the monthly data network rate.**

State Training Enrollment Application

Complete IN FULL and return AT LEAST ONE WEEK prior to the first day of class.

Course Data

Course Request: _____

Date Offered: _____

Student Data

Name: _____

Soc. Sec. Number (for P/P/P): _____

Agency & Division: _____

Mailing Address: _____

Phone: _____

How have you met the required prerequisites for this course? Explain, giving the class(s) taken, tutorial completed, and/or experience.

_____

_____

Billing Information/Authorization Mandatory

User ID: _____ Agency#: ____ Authorized Signature: _____

If attending Oracle Developer or Designer training, your application must also be approved by the agency IT Manager.

IT Manager _____

Training is needed for:

- ☐ Agency Oracle Developer
- ☐ Continuing education opportunity. (Agency will be billed for training.)
- ☐ Agency contractor. (Agency will be billed for training.)

Full class fee will be billed to registrant unless cancellation is made three business days before the start date of the class.

DeadHead completed form to:

State Training Center
Helena College of Technology of the University of Montana
Phone 444-6800 FAX 444-6892

DeadHead Back

Dept. of Administration
Information Services Div.

FAX Back

Information Services Div.
406-444-2701

Mail Back

Dept. of Administration
Information Services Div.
PO Box 200113
Mitchell Building, Rm 229
Helena, MT 59620-0113

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Editor's Notes

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